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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,759	12/31/2003	Wolfgang Roesner	AUS920030570US1	9113
42640	7590	11/17/2005	EXAMINER	
DILLON & YUDELL LLP 8911 NORTH CAPITAL OF TEXAS HWY SUITE 2110 AUSTIN, TX 78759			TO, TUYEN P	
			ART UNIT	PAPER NUMBER
			2825	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/749,759	<b>Applicant(s)</b> ROESNER ET AL.	
	<b>Examiner</b> Tuyen To	<b>Art Unit</b> 2825	<i>TT</i>

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.  
     4a) Of the above claim(s) 7-10, 17-20 and 27-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11-16 and 21-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/06/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

This is a response to the communication filed on 12/31/2003. Claims 1-30 are pending.

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- |            |   |
|------------|---|
| Group I,   | Claim(s) 1-6, 11-16, and 21-26, drawn to a method of associating a mapping function with a configuration construct of a digital design with the using of HDL files, classified in class 716, subclass 03                                    |
| Group II,  | Claim(s) 7-8, 17-18, and 27-28, drawn to a method of associating a mapping function with a configuration construct of a digital design with the using of the compiled HDL files (intermediate files), classified in class 716, subclass 03. |
| Group III, | Claim(s) 9-10, 19-20, and 29-30, drawn to an execution of the method by setting a value of a configuration latch in a design, classified in class 716, subclass 03.   |

2. The inventions are distinct, each from the other because of the following reasons:

Inventions listed as Groups I-III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, inventions I-III have separate utility. Invention I uses top-level HDL files in the method of associating a mapping function with configuration construct, invention II uses the compiled HDL files (design intermediate files), and invention III executes the method by setting a value of a configuration latch in a design. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I or II is not required for Group III, restriction for examination purposes as indicated is proper.

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During a telephone conversation with **Mr. Russell (Reg. No. 40796)** on 11/09/2005 a provisional election was made **without traverse** to prosecute the invention of **Group I, claims 1-6, 11-16, and 21-26**. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-10, 17-20, and 27-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Applicant is advised that cancellation of non-elected claims is required.

#### ***Claim Objections***

Claims 5, 15, and 25 are objected to because the recited "a pseudo-random integer value" is not clearly specified in the specification. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-5, 11-15, and 21-25** are rejected under 35 U.S.C. 102(e) as being anticipated by Beardslee et al. (US Patent No. 6,618,839).

**Referring to claims 1 and similarly recited claims 11 and 21,**

*Beardslee et al. disclose a method in a data processing system of associating a mapping function with a configuration construct of a digital design defined by one or more hardware description language (HDL) files, said method comprising:*

in an HDL statement within one of one or more HDL files representing a digital design, specifying a configuration latch within a design entity forming at least a portion of the digital design (*Beardslee et al. disclose a method and system for analysis, diagnosis and debugging a configurable digital design at a HDL level (see abstract, col. 5, line 56 to col. 6, line 46). A HDL description of a portion/design entity of a digital system design is used in a process to enhance debugging capabilities (col. 5, line 56 to col. 6, line 46). In the HDL description file, register of a DIC (a configuration latch) is allocated (i.e. specifying) to configure the DIC and to hold the status of the DIC (col. 20, line 53 to col. 21, line 14). In col. 30, lines 1-16, a DIC is specified in an HDL statement).*

in the one or more HDL files, specifying a Dial defining a relationship between each of a plurality of input values and a respective one of a plurality of different output values (*Beardslee et al. disclose a communication controller ("a dial ") used by the HDL-based the hardware debugger to read or set the configuration registers( see Fig. 8, col. 32, ll. 5-56 );*

in the one or more HDL files, including a statement that instantiates an instance of said Dial in association with said configuration latch such that a one-to-one correspondence exists between a value contained within said configuration latch and an input value of said instance of said Dial (*in col. 29, ll. 62 to col. 30, ll. 16, shows an instance module of a DIC); and*

in the one or more HDL files, including a statement associating the Dial with a mapping function that applies a selected transformation to values read from or written to said instance of said Dial (*Beardslee et al. disclose a communication controller ("a dial ") used by the HDL-based the hardware debugger to read or set the configuration registers( see Fig. 8, col. 32, ll. 5-56).*

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*Each of DIC registers includes configuration register is mapped into an address space of memory (col. 27, ll. 57-64); in col. 29, ll. 62 to col. 30, ll. 16, shows an instance module of a DIC).*

*Referring to claims 2-5, 12-15, and 22-25, Beardslee et al. disclose a DIC register to physical mapping module used for mapping which must include a mathematical transformation/ shifting value/ integer input value/ a pseudo-random integer value (col. 27, ll. 57-64); also in col. 29, ll. 62 to col. 30, ll. 16, shows an instance module of a DIC).*

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 6, 16, and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Beardslee et al. in view of Stong et al. (US Pub. No. 2003/0093735).

Beardslee et al. disclose substantially all the elements in claims 1, 11, and 21 except wherein said Dial comprises a read-only Dial.

Stong et al. disclose the using of ROM for performing mapping function (col. 4[0023]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the method of Beardslee et al. with the method disclosed by Stong et al. because such modification includes a ROM for mapping function would have been used to assure that all memory operation are mutually exclusive to each other, to thereby providing an efficient method for a IC 's built in self test (p. 4[0023]; p1[0005]).

**Conclusion**


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyen To whose telephone number is (571) 272-8319. The examiner can normally be reached on 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system; contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tuyen To  
Patent Examiner  
AU 2825



VUTHE SIEK  
PRIMARY EXAMINER